

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY) 14-09-2012		2. REPORT TYPE Abstract		3. DATES COVERED (From - To) 09-2011 - Present	
4. TITLE AND SUBTITLE Coastal changes in temperature and salinity observed during Hurricane Isaac recorded and downloaded by NASA DRIFTERS Moored in Heron Bay and at Half Moon Island, Louisiana.				5a. CONTRACT NUMBER NNS10AA35C	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Maria Kalcic (1) Rodolfo Iturriaga (2) Philip Kuper (3) Duane O'Neal (4) Lauren Underwood (5) Rose Fletcher (6)				5d. PROJECT NUMBER C04843.00669 / Q6111PCC00	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) National Aeronautics and Space Administration, Washington, DC 20546-0001				10. SPONSORING/MONITOR'S ACRONYM(S) NASA	
				11. SPONSORING/MONITORING REPORT NUMBER	
12. DISTRIBUTION/AVAILABILITY STATEMENT Unclassified - Unlimited Subject Category 43 Availability: NASA CASI (301) 621-0390					
13. SUPPLEMENTARY NOTES Abstract to be given at the Bays and Boyous Symposium in Biloxi, MS, November 14, 2012					
14. ABSTRACT Major changes in salinity (~14 ppt.) and temperature (~40C) were continuously registered by two prototype NASA DRIFTERS, surface moored floaters, that NASA's Applied Science and Technology Project Office (ASTPO) has developed. The DRIFTER floating sensor module is equipped with an Arduino open-source electronics prototyping platform and programming language (http://www.arduino.cc), a GPS (Global Positioning System) module with antenna, a cell phone SIM (Subscriber Identity Module) card and a cellular antenna which is used to transmit data, and a probe to measure temperature and conductivity (from which salinity can be derived). The DRIFTER is powered by a solar cell panel and all the electronic components are mounted and sealed in a waterproof encasement. Position and measurement data are transmitted via short message service (SMS) messaging to a Twitter site (DRIFTER 002@NASADRIFTER_002 and DRIFTER 004@NASADRIFTER_004), which provides a live feed. These data are then imported into a Google spreadsheet where conductivity is converted to salinity, and graphed in real-time. The spreadsheet data will be imported into a webpage maintained by ASTPO, where it will be displayed available for download.					
15. SUBJECT TERMS oyster fisheries, salinity, floater, temperature, coastal water, Heron Bay Louisiana, GPS, Hurricane Isaac					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			STI Help Desk at email: help@sti.nasa.gov 19b. TELEPHONE NUMBER (Include area code)
U	U	U	UU	1	(301) 621-0390